John Thiam-Leong Thong

List of Publications by Citations

124 papers	7,496 citations	42 h-index	85 g-index
131 ext. papers	8,256 ext. citations	6.8 avg, IF	5.79 L-index

#	Paper	IF	Citations
124	Length-dependent thermal conductivity in suspended single-layer graphene. *Nature Communications*, **2014**, 5, 3689	17.4	603
123	Probing layer number and stacking order of few-layer graphene by Raman spectroscopy. *Small*, **2010**, 6, 195-200	11	521
122	High mobility, printable, and solution-processed graphene electronics. *Nano Letters*, **2010**, 10, 92-8	11.5	413
121	Experimental demonstration of a bilayer thermal cloak. *Physical Review Letters*, **2014**, 112, 054302	7.4	362
120	Large-scale synthesis and field emission properties of vertically oriented CuO nanowire films. *Nanotechnology*, **2005**, 16, 88-92	3.4	314
119	Simple fabrication of a ZnO nanowire photodetector with a fast photoresponse time. *Applied Physics Letters*, **2006**, 88, 133114	3.4	287
118	Full control and manipulation of heat signatures: cloaking, camouflage and thermal metamaterials. *Advanced Materials*, **2014**, 26, 1731-4	24	262
117	High-throughput synthesis of graphene by intercalation-exfoliation of graphite oxide and study of ionic screening in graphene transistor. *ACS Nano*, **2009**, 3, 3587-94	16.7	237
116	Controlled Growth and Field-Emission Properties of Cobalt Oxide Nanowalls. *Advanced Materials*, **2005**, 17, 1595-1599	24	235
115	Thermal transport in suspended and supported few-layer graphene. *Nano Letters*, **2011**, 11, 113-8	11.5	214
114	Multiwalled Carbon Nanotubes Beaded with ZnO Nanoparticles for Ultrafast Nonlinear Optical Switching. *Advanced Materials*, **2006**, 18, 587-592	24	199
113	Magnetism in MoS2 induced by proton irradiation. *Applied Physics Letters*, **2012**, 101, 102103	3.4	170
112	Low resistance metal contacts to MoS2 devices with nickel-etched-graphene electrodes. *ACS Nano*, **2015**, 9, 869-77	16.7	154
111	Invisible Sensors: Simultaneous Sensing and Camouflaging in Multiphysical Fields. *Advanced Materials*, **2015**, 27, 7752-8	24	145
110	Low-contact-resistance graphene devices with nickel-etched-graphene contacts. *ACS Nano*, **2014**, 8, 994-1001	16.7	143
109	Properties and applications of cobalt-based material produced by electron-beam-induced deposition. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2002**, 20, 1295-1302	2.9	119
108	An Electrically Tuned Solid-State Thermal Memory Based on Metal–Insulator Transition of Single-Crystalline VO2 Nanobeams. *Advanced Functional Materials*, **2011**, 21, 1602-1607	15.6	114

107	Improving the NH(3) gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. *Nanotechnology*, **2008**, 19, 205502	3.4	112
106	TMAH etching of silicon and the interaction of etching parameters. *Sensors and Actuators A: Physical*, **1997**, 63, 243-249	3.9	102
105	Large-diameter graphene nanotubes synthesized using Ni nanowire templates. *Nano Letters*, **2010**, 10, 4844-50	11.5	94
104	Flow sensing of single cell by graphene transistor in a microfluidic channel. *Nano Letters*, **2011**, 11, 5240-6	11.5	93
103	What does annealing do to metal-graphene contacts?. *Nano Letters*, **2014**, 14, 3840-7	11.5	92
102	P-type electrical, photoconductive, and anomalous ferromagnetic properties of Cu2O nanowires. *Applied Physics Letters*, **2009**, 94, 113106	3.4	90
101	Co-synthesis of ZnO CuO Nanostructures by Directly Heating Brass in Air. *Advanced Functional Materials*, **2006**, 16, 2415-2422	15.6	89
100	Substrate-friendly synthesis of metal oxide nanostructures using a hotplate. *Small*, **2006**, 2, 80-4	11	84
99	Efficient field emission from Fe2O3 nanoflakes on an atomic force microscope tip. *Applied Physics Letters*, **2005**, 87, 023103	3.4	78
98	Laser Pruning of Carbon Nanotubes as a Route to Static and Movable Structures. *Advanced Materials*, **2003**, 15, 300-303	24	77
97	Gold on graphene as a substrate for surface enhanced Raman scattering study. *Applied Physics Letters*, **2010**, 97, 163111	3.4	73
96	The effect of layer number and substrate on the stability of graphene under MeV proton beam irradiation. *Carbon*, **2011**, 49, 1720-1726	10.4	73
95	High-current field emission from a vertically aligned carbon nanotube field emitter array. *Applied Physics Letters*, **2001**, 79, 2811-2813	3.4	67
94	Effects of CF4 plasma on the field emission properties of aligned multi-wall carbon nanotube films. *Carbon*, **2005**, 43, 395-400	10.4	66
93	Thermal Conductance of the 2D MoS/h-BN and graphene/h-BN Interfaces. *Scientific Reports*, **2017**, 7, 43886	4.9	64
92	Enhanced field emission from O2 and CF4 plasma-treated CuO nanowires. *Chemical Physics Letters*, **2006**, 419, 458-463	2.5	62
91	Tuning the threshold voltage of MoS2 field-effect transistors via surface treatment. *Nanoscale*, **2015**, 7, 10823-31	7.7	60
90	Mega-electron-volt proton irradiation on supported and suspended graphene: A Raman spectroscopic layer dependent study. *Journal of Applied Physics*, **2011**, 110, 084309	2.5	52

89	Field-emission induced growth of nanowires. *Applied Physics Letters*, **2002**, 81, 4823-4825	3.4	52
88	Determination of secondary electron yield from insulators due to a low-kV electron beam. *Journal of Applied Physics*, **1998**, 84, 4543-4548	2.5	51
87	Manipulating Steady Heat Conduction by Sensu-shaped Thermal Metamaterials. *Scientific Reports*, **2015**, 5, 10242	4.9	50
86	Diameter-dependent thermal transport in individual ZnO nanowires and its correlation with surface coating and defects. *Small*, **2012**, 8, 738-45	11	49
85	Profiling nanowire thermal resistance with a spatial resolution of nanometers. *Nano Letters*, **2014**, 14, 806-12	11.5	47
84	Engineering the thermal conductivity along an individual silicon nanowire by selective helium ion irradiation. *Nature Communications*, **2017**, 8, 15919	17.4	45
83	Suppressing thermal conductivity of suspended tri-layer graphene by gold deposition. *Advanced Materials*, **2013**, 25, 6884-8	24	43
82	Thermal Transport in 2D Semiconductors□Considerations for Device Applications. *Advanced Functional Materials*, **2020**, 30, 1903929	15.6	41
81	Fabrication of vertically aligned carbon nanotubes patterns by chemical vapor deposition for field emitters. *Diamond and Related Materials*, **2002**, 11, 1638-1642	3.5	40
80	Efficient and broadband polarization rotator using horizontal slot waveguide for silicon photonics. *Applied Physics Letters*, **2012**, 101, 021105	3.4	39
79	Field-emission properties of ultrathin 5nm tungsten nanowire. *Journal of Applied Physics*, **2006**, 100, 114325	2.5	39
78	Single-image signal-to-noise ratio estimation. *Scanning*, **2001**, 23, 328-36	1.6	38
77	Interference lithographically defined and catalytically etched, large-area silicon nanocones from nanowires. *Nanotechnology*, **2010**, 21, 205305	3.4	36
76	Ultralow Thermal Conductivity of Single-Crystalline Porous Silicon Nanowires. *Advanced Functional Materials*, **2017**, 27, 1702824	15.6	35
75	The effects of gas exposure and UV illumination on field emission from individual ZnO nanowires. *Nanotechnology*, **2007**, 18, 185608	3.4	34
74	Large-Scale Ordered Carbon Nanotube Arrays Initiated from Highly Ordered Catalyst Arrays on Silicon Substrates. *Chemistry of Materials*, **2004**, 16, 2757-2761	9.6	34
73	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. *Advanced Materials*, **2018**, 30, e1804928	24	31
72	Polarization splitter using horizontal slot waveguide. *Optics Express*, **2013**, 21, 3363-9	3.3	30

71	High-resolution nanowire atomic force microscope probe grownby a field-emission induced process. *Applied Physics Letters*, **2004**, 84, 5207-5209	3.4	28
70	Direct amperometric detection of glucose on a multiple-branching carbon nanotube forest. *Analyst, The*, **2008**, 133, 448-51	5	27
69	Site-specific growth of ZnO nanowires from patterned Zn via compatible semiconductor processing. *Journal of Crystal Growth*, **2008**, 310, 2485-2492	1.6	27
68	Field emission from a large area of vertically-aligned carbon nanofibers with nanoscale tips and controlled spatial geometry. *Carbon*, **2010**, 48, 1362-1368	10.4	25
67	Characterisation of pyramid formation arising from the TMAH etching of silicon. *Sensors and Actuators A: Physical*, **1998**, 71, 238-243	3.9	25
66	Controlled synthesis of aligned carbon nanotube arrays on catalyst patterned silicon substrates by plasma-enhanced chemical vapor deposition. *Applied Surface Science*, **2001**, 181, 248-254	6.7	25
65	Selective Engineering of Chalcogen Defects in MoS by Low-Energy Helium Plasma. *ACS Applied Materials & Interfaces*, **2019**, 11, 24404-24411	9.5	24
64	Life cycle of a tungsten cold field emitter. *Journal of Applied Physics*, **2006**, 99, 104903	2.5	24
63	Effects of adsorbates on the field emission current from carbon nanotubes. *Applied Surface Science*, **2004**, 233, 20-23	6.7	24
62	Fabrication of super-sharp nanowire atomic force microscope probes using a field emission induced growth technique. *Review of Scientific Instruments*, **2004**, 75, 3248-3255	1.7	24
61	In situnanowire growth for electrical interconnects. *Nanotechnology*, **2004**, 15, 687-691	3.4	24
60	Enhanced field emission from CuO nanowire arrays by in situ laser irradiation. *Journal of Applied Physics*, **2007**, 102, 114302	2.5	23
59	Low-Symmetry PdSe2 for High Performance Thermoelectric Applications. *Advanced Functional Materials*, **2020**, 30, 2004896	15.6	23
58	Effect of shot noise and secondary emission noise in scanning electron microscope images. *Scanning*, **2004**, 26, 36-40	1.6	22
57	MoS2 oxygen sensor with gate voltage stress induced performance enhancement. *Applied Physics Letters*, **2015**, 107, 123105	3.4	21
56	Cobalt-mediated crystallographic etching of graphite from defects. *Small*, **2012**, 8, 2515-23	11	21
55	Evolution of hillocks during silicon etching in TMAH. *Journal of Micromechanics and Microengineering*, **2001**, 11, 61-69	2	21
54	Vacuum level dependent photoluminescence in chemical vapor deposition-grown monolayer MoS. *Scientific Reports*, **2017**, 7, 16714	4.9	20

53	Insulator charging under irradiation with a stationary electron probe. *Measurement Science and Technology*, **1994**, 5, 1089-1095	2	19
52	Plasma synthesis of well-aligned carbon nanocones. *Diamond and Related Materials*, **2005**, 14, 902-906	3.5	18
51	Patterning and fusion of CuO nanorods with a focused laser beam. *Nanotechnology*, **2005**, 16, 1238-1244	3.4	16
50	High-resolution atomic force microscope nanotip grown by self-field emission. *Applied Physics Letters*, **2002**, 81, 3037-3039	3.4	16
49	Characteristics of single metallic nanowire growth via a field-emission induced process. *Journal of Applied Physics*, **2006**, 99, 064309	2.5	15
48	Selectivity of MoS 2 gas sensors based on a time constant spectrum method. *Sensors and Actuators A: Physical*, **2017**, 255, 28-33	3.9	14
47	Raman analysis of gold on WSe2 single crystal film. *Materials Research Express*, **2015**, 2, 065009	1.7	14
46	Origin of Contact Resistance at Ferromagnetic Metal-Graphene Interfaces. *ACS Nano*, **2016**, 10, 11219-11227	12.7	14
45	Polymer-protected sub-2-nm-nanogap fabrication for biological sensing in near-physiological conditions. *Small*, **2009**, 5, 2797-801	11	14
44	Horizontally directed growth of carbon nanotubes utilizing self-generated electric field from plasma induced surface charging. *Applied Physics Letters*, **2007**, 91, 243108	3.4	14
43	The growth mechanism and field-emission properties of single carbon nanotips. *Nanotechnology*, **2006**, 17, 3655-3661	3.4	13
42	Lateral ZnO nanowire growth on a planar substrate using a growth barrier. *Nanotechnology*, **2007**, 18, 055601	3.4	13
41	A topography measurement instrument based on the scanning electron microscope. *Review of Scientific Instruments*, **1992**, 63, 131-138	1.7	13
40	Control of surface morphology and crystal structure of silicon nanowires and their coherent phonon transport characteristics. *Acta Materialia*, **2014**, 64, 62-71	8.4	11
39	Reduction of charging effects using vector scanning in the scanning electron microscope. *Scanning*, **2001**, 23, 395-402	1.6	11
38	In situ topography measurement in the SEM. *Scanning*, **1992**, 14, 65-72	1.6	10
37	Improving the morphological stability of a polycrystalline tungsten nanowire with a carbon shell. *Nanotechnology*, **2010**, 21, 195701	3.4	9
36	Effect of sidewall modification in the determination of friction coefficient of vertically aligned carbon nanotube films using friction force microscopy. *Carbon*, **2007**, 45, 2737-2743	10.4	9

35	Thermal oxidation of polycrystalline tungsten nanowire. *Journal of Applied Physics*, **2010**, 108, 094312	2.5	8
34	Self-aligned nanolithography by selective polymer dissolution. *Nanoscale*, **2010**, 2, 2302-6	7.7	8
33	A portable scanning electron microscope column design based on the use of permanent magnets. *Scanning*, **1998**, 20, 87-91	1.6	8
32	Add-on transmission attachments for the scanning electron microscope. *Review of Scientific Instruments*, **2003**, 74, 134-140	1.7	8
31	Ferromagnetic nano-dot array fabricated by electron beam radiation induced nano-scale phase transition. *Journal of Applied Physics*, **2002**, 91, 6854	2.5	8
30	Investigations on the morphology of silicon surfaces anisotropically etched with TMAH. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2000**, 72, 177-179	3.1	8
29	Atomic Layer Deposition of High-Quality AlO Thin Films on MoS with Water Plasma Treatment. *ACS Applied Materials & Interfaces*, **2019**, 11, 35438-35443	9.5	7
28	Studying thermal transport in suspended monolayer molybdenum disulfide prepared by a nano-manipulator-assisted transfer method. *Nanotechnology*, **2020**, 31, 225702	3.4	7
27	Gallium ion implantation greatly reduces thermal conductivity and enhances electronic one of ZnO nanowires. *AIP Advances*, **2014**, 4, 057128	1.5	7
26	Parallel fabrication of polymer-protected nanogaps. *Nanotechnology*, **2010**, 21, 385303	3.4	7
25	Improving the speed of scanning electron microscope deflection systems. *Measurement Science and Technology*, **1999**, 10, 1070-1074	2	7
24	Picosecond electron pulse generation via beam deflection-chopping in the SEM. *Measurement Science and Technology*, **1991**, 2, 207-216	2	7
23	Capturing a DNA duplex under near-physiological conditions. *Applied Physics Letters*, **2010**, 97, 163702	3.4	6
22	Field emission properties of individual zinc oxide nanowire field emitter. *Journal of Vacuum Science & Technology B*, **2008**, 26, 983		6
21	Improving the dynamic response of magnetic electron lenses. *Measurement Science and Technology*, **1991**, 2, 1116-1118	2	6
20	Converting carbon nanofibers to carbon nanoneedles: catalyst splitting and reverse motion. *Nanoscale*, **2010**, 2, 2180-5	7.7	5
19	Eddy current compensation for magnetic electron lenses. *Measurement Science and Technology*, **1996**, 7, 1583-1590	2	5
18	In situ observation of localized metallic nanocrystal growth on carbon nanotube templates in a scanning electron microscope. *Nanotechnology*, **2006**, 17, 2373-2377	3.4	5

17	Field-emission-induced growth of nanowire between electrodes. *Applied Physics Letters*, **2006**, 88, 193116	3.4	5
16	Direct magnetic patterning of nonferromagnetic Co-C thin films by electron-beam radiation. *IEEE Transactions on Magnetics*, **2002**, 38, 1970-1972	2	5
15	Electron-acoustic and surface electron beam induced voltage signal formation in scanning electron microscopy analysis of semiconducting samples. *Ultramicroscopy*, **2004**, 101, 183-95	3.1	4
14	Transit time effect in electron beam testing voltage measurements. *Measurement Science and Technology*, **1992**, 3, 827-837	2	4
13	An electron-optical phase-shift element for high-speed electron beam testing. *Measurement Science and Technology*, **1990**, 1, 337-344	2	4
12	Modification of thermal transport in few-layer MoS by atomic-level defect engineering. *Nanoscale*, **2021**, 13, 11561-11567	7.7	4
11	Field-Effect Transistors: Low-Symmetry PdSe2 for High Performance Thermoelectric Applications (Adv. Funct. Mater. 52/2020). *Advanced Functional Materials*, **2020**, 30, 2070347	15.6	3
10	Probing thermal transport across amorphous region embedded in a single crystalline silicon nanowire. *Scientific Reports*, **2020**, 10, 821	4.9	3
9	Improving the NH3gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. *Nanotechnology*, **2008**, 19, 399801-399801	3.4	3
8	A Contactless 3-D Measuring Technique For IC Inspection **1987**,		3
7	Lateral heat flow distribution and defect-dependent thermal resistance in an individual silicon nanowire. *Nanotechnology*, **2016**, 27, 115402	3.4	2
6	Miniature scanning electron microscope design based upon the use of permanent magnets **1997**,		2
5	Simple, low-cost technique for photolithographic self-aligned top metal contacts to nanowires and nanotubes. *Nanotechnology*, **2008**, 19, 455305	3.4	1
4	Submicron Co(TaC) line array produced by electron-beam direct writing. *Journal of Applied Physics*, **2003**, 93, 7417-7419	2.5	1
3	MoS2 based photosensor detecting both light wavelength and intensity. *Sensors and Actuators A: Physical*, **2017**, 266, 205-210	3.9	
2	Suppression of Void Formation in Si0.5Ge0.5 Alloy Nanowire during Ni Germanosilicidation. *Advanced Engineering Materials*, **2014**, 16, 1032-1037	3.5	
1	Low-Contact-Resistance Contacts to Graphene via Metal-Mediated Etching. *Materials Research Society Symposia Proceedings*, **2013**, 1553, 1		